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PROJECTED COST SAVINGS DUE TO CASELOADS AVOIDED

$8.1M BUDGET PROJECTED TO SAVE $55.87M IN 2009-11 CASELOADS; LONG-TERM SAVINGS TOP $296M

TECHNICAL NOTES

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ABSTRACT OF MAJOR FINDINGS

Recent studies have provided evidence that $55.87m in caseload savings per biennium is a conservative estimate of the savings directly attributable to the Family Policy Council community capacity building.

- A fact sheet (Jan. 2009) identified and estimated, using conservative methods, caseload reductions and projected biennial savings of $55.87 million attributable to Family Policy Council funding.
- A fact sheet (Sept.2008) and a technical paper (Feb. 2009) showed how Family Policy Council funding is related to community capacity building and reductions in rates of seven children and family problems since 1998.

BASIS FOR COST SAVINGS ANALYSIS

Family Policy Council Community Public Health and Safety Networks are special purpose districts charged with reducing the rates of child abuse and neglect, youth violence, dropping out of school, and other major social problems. Authorized by the Legislature in 1994, 54 Networks formed, covering every Washington county as well as 10 Tribes. Networks are subject to uniform contractual obligations and reporting requirements; funding is base plus formula.

A 2001 budget proviso required a 25% reduction in funding. Rather than making across-the-board cuts, the Family Policy Council decided to eliminate funding for some of the networks based on their progress in building community capacity to reduce problem behaviors. Since 1998 the progress of each Network in developing such community capacity had been measured using a standardized scoring index. As a result of the 2001 scoring, 18 Networks were de-funded, leaving 10 counties without a Network. The City of Seattle and five Tribes were also de-funded.

At the time of the cuts, there were no significant differences between the funded and unfunded counties with respect to the pile-up of severe children and family problems and major social, economic and demographic characteristics. This allowed us to use the unfunded counties as a comparison group: a group that could indicate in an unbiased way what would have occurred in the absence of FPC funding and support.

BASIS FOR ATTRIBUTING RATE REDUCTIONS TO COMMUNITY NETWORKS

A biennial scoring of community capacity allowed us to empirically study the correlation between levels of community capacity and reductions in rates of children and family problems from 1998 to 2006. No other state agency is responsible for building community capacity. Key components of community capacity are: focus/shared responsibility for targeted social problems, learning and collaborative leadership among partners and attention to results. We found that:

- Higher levels of community capacity were highly correlated (at .82) with reductions in community-wide rates of seven of children and family problems from 1998 to 2006. The reductions were statistically significant, even after controlling for initial conditions and subsequent changes in social, economic and demographic factors.
- Improvements in community capacity among Family Policy Council funded counties in the 1998-2006 study period were significantly correlated (at .50) with decreases in overall severity of children and family problems.

SUMMARY OF CALCULATION METHODS

We calculated *avoided caseloads* for a long period: from 1998 to 2006. While the Family Policy Council is responsible for addressing seven costly social problems, we analyzed cost savings for four of them: out of home placement of children, births to teen mothers, dropping out of school, and juvenile felonies. We calculated savings for specific counties where Networks had focused their theory of change, strategy and efforts to reduce the four problems.

For each of these counties we estimated *expected* rates of problems, rates that would have occurred if their Network had NOT been funded, using what we observed happened on average in the comparison group of ten unfunded counties. The expected rates were adjusted to start from the actual 1998 baseline rate for each county studied. The rates were expected to change through time based on how changes occurred on average in the comparison group. Using these rates, we calculated the number of cases expected to occur and *caseloads avoided as the difference between the expected and the actual number of cases observed in each county.* We averaged avoided cases yearly across recent years, from 2002 through 2006, and projected avoided caseloads in the 2009-11 biennium.

CONSERVATIVE NATURE OF ESTIMATES OF CASES AVOIDED AND COST SAVINGS

When estimating cases avoided and taxpayer savings we used conservative methods. We:

- Limited analysis to four indicators of children and family problems
- Avoided duplicate savings across cases avoided for each of the four problems
- Only included savings from Community Networks that targeted the four problems analyzed
- Based 2009-2011 avoided caseload estimates on annual 2002 – 2006 averages, with no estimates for projected increases over time
- Did not claim short term savings for high school drop outs
- Used actual direct program cost savings to taxpayers, and not broader societal benefits
- Used Washington State program costs whenever feasible.
- Excluded victim, business and community costs

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DETAILED TECHNICAL NOTES

WHY FOCUS ON IMPROVEMENT IN RATES OF ONLY FOUR CHILDREN AND FAMILY PROBLEMS?

In January 2008, the Washington Legislature asked the Family Policy Council for a cost savings analysis of the prevention activities planned, initiated and coordinated with partners by Public Health and Safety Community Networks funded and supported by the Family Policy Council.

The Family Policy Council asked the DSHS Planning and Performance Team to estimate ***avoided caseloads*** for:

- Youth felony filings (filings per 1000 youth, 10-17 years, as reported by the Administrative Office of the Courts, Caseload Studies)
- Out of home placements (dependency filings per 1000, 0-17 years, as reported by the Administrative Office of the Courts, Caseload Studies)
- High School drop outs (High School yearly drop out rate, as reported by the Office of Superintendent of Public Instruction)
- Teen pregnancies (births per 1000 females, 10-17 years, as reported by the Department of Health)

Although Public Health and Safety Community Networks are legislatively mandated to address seven children and family problems, the Family Policy Council selected the above four indicators. They were ones that were most valid and reliable and had a solid body of evidence clearly linking rate reductions to direct costs avoided by taxpayers.

WHAT WERE THE TRENDS IN THE OVERALL RATES OF THESE FOUR PROBLEMS BETWEEN 1998 AND 2006 FOR FUNDED AND UNFUNDED COMMUNITY NETWORKS?

The following are the differences in the rates between funded and unfunded Community Networks as shown in Longhi and Porter February 2009 Technical Paper's Addendum.

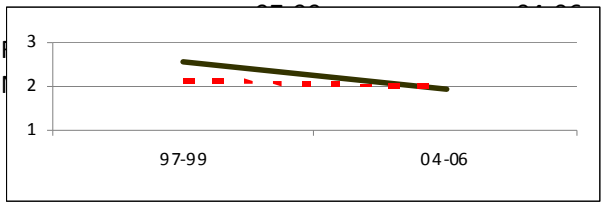
Overall Change in Rates for 4 Youth & Family Problems Among FPC Funded & Unfunded Counties

FPC Funded * *(n=28)*

Unfunded * *(n=10)*

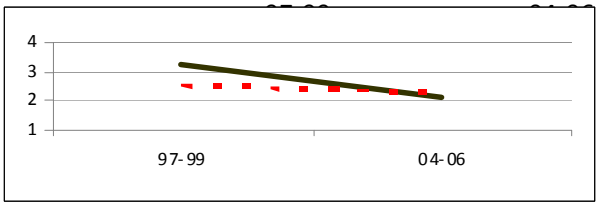
* excluding King County (partially funded & unfunded)

Juvenile Offenders



Difference in slopes sig .019

Juv. Arrest for Violent Crime



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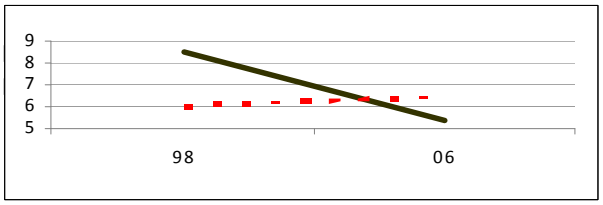
Yearly H.S. School Drop-out



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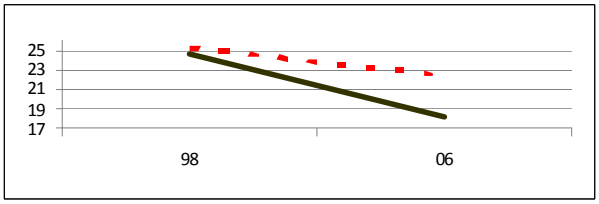
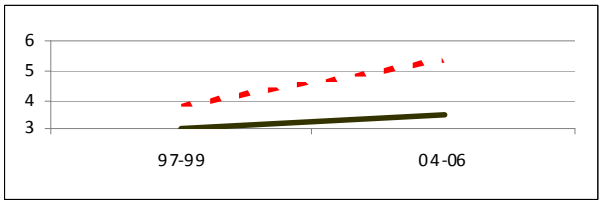
Freshman to Senior Drop-out



Difference in slopes sig .046

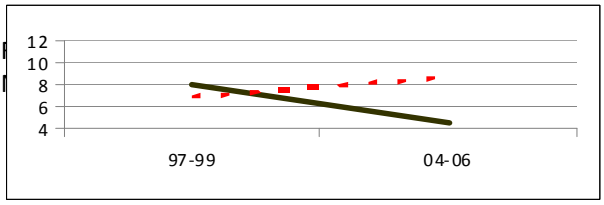
Out-of-Home Placements



Difference in slopes sig .043

Births to Teens age 10-17

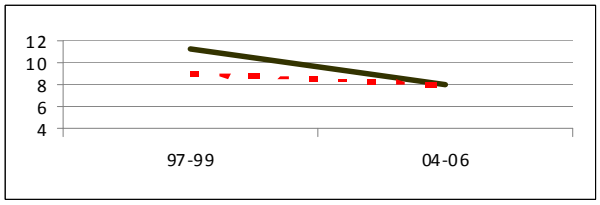
Large Communities**



Difference in slopes sig at < .001 (t=4.06)

***10-17 population greater than 25,000 (Yakima versus Pierce, Snohomish, Spokane, Clark, Kitsap, & Thurston.)*

Smaller Communities***



Difference in slopes not sig

****10-17 population greater than 3,000*

Notes

In the cost analyses we used juvenile felonies instead of any offence or violence arrests, as reported above, in order to eliminate biases introduced by possible differences in police practices and reporting and to facilitate assigning costs.

For High School drop-out rates we chose the official yearly indicator reported by the Office of the Superintendent of Public Instruction.

ARE THE DIFFERENCES IN TRENDS OF RATES ATTRIBUTABLE TO FUNDING OF COMMUNITY NETWORKS AND THEIR SUCCESS IN BUILDING COMMUNITY CAPACITY?

Earlier work by Longhi and Porter (Fact sheet, September 2008; Technical Paper, February 2009) established clear empirical links between improvement in overall rates of children and family problems, FPC funding and the community capacity built by Community Networks.

ATTRIBUTABLE TO FUNDING

First, the authors made a strong case that funding community networks resulted in better community outcomes that were NOT explained by other social, economic and demographic factors.

> ***FPC funded counties had made significant improvements in the severity of children and family problems that were not explained by initial levels or changes in social, economic and demographic factors. Severity of problems got worse in FPC unfunded counties.*** *See Technical Paper, page 18-21*

ATTRIBUTABLE TO BUILDING COMMUNITY CAPACITY

Second, the authors made a special case that the key difference between FPC funded and unfunded counties was in the level of capacity that communities were able to build. Better community-wide outcomes were found to be a function of levels of community capacity as predicted by the theory of the community-based model of prevention. Greater capacity meant that communities had increased the scope, scale and sustainability of their efforts; efforts strategically chosen to fit the strengths and conditions of their community.

The authors found large differences in the prevalence of certain types of activities as communities reached higher levels of community capacity. *See Technical Paper's Addendum, pages 35-36.*

> Communities at lower levels of capacity started by involving youth as participants in prevention programs and involving parents and families in building skills and supports.
>
> Communities at higher levels of capacity still engaged in these activities, but also trained more professionals and volunteers, engaged more people in community education, changing neighborhood norms and recruiting and training leaders, and, finally, getting many organizations to work together differently.

The study found a high correlation between community capacity and outcomes among FPC funded counties

> ***A higher level of community capacity was highly correlated (at .82) with a higher number of better-than-state improvements in rates of children and family problems.*** *See Technical Paper, page 21-24.*

The authors conducted a factor analysis and found a common underlying factor in changes among FPC funded counties

> ***Level of community capacity was highly correlated with a common factor underlying all better- than-state improvements in rates of children and family problems (as theoretically anticipated by both common roots of problems and a system, strategic, multilevel approach to prevention efforts)*** *See Technical Paper, page 24-25.*

They examined the nature of the relation between community capacity level and the number of rate improvements made and showed that

> ***The number of rate improvements grew exponentially, as expected, with higher levels of capacity.*** *See Technical Paper, page 25 and 27.*

Finally, they tested the effects of changes in community capacity during the 1998-2006 study period. They found that

> ***Changes in community capacity were correlated (at .50) with changes in the severity of children and family problems. They were NOT explained by initial levels or changes in other social, economic and demographic factors.*** *See Technical Paper, page 28.*

HOW DID WE DETERMINE 'AVOIDED CASELOADS', THE DIFFERENCE BETWEEN WHAT HAPPENED AND WHAT WOULD HAVE HAPPENED WHITHOUT FPC FUNDING?

Because of the complexity of linking prevention activities to actual caseload reductions, we elected to take a very conservative approach to estimating avoided caseloads. The avoided caseloads calculated are likely to be 'floor' estimates.

Strategy and Approach Used

1. We compared the rate of change in caseload rates for a comparison group of ten counties without FPC funded Community Networks to the rate of change in indicator rates in counties with FPC funded Community Networks that had actually engaged in efforts to reduce that problem behavior. *See red versus green trend lines in Figure 1 below for the case of births to teen age mothers.*

2. We calculated expected changes in rates for funded counties based on the actual experience of unfunded counties, but starting from the same 1998 level. *See the black trend line in Figure 1.* This procedure of constraining FPC funded and unfunded counties to have the same initial rates excluded the possibility of attributing savings to FPC funding while they were due to preexisting conditions.

3. We calculated avoided caseloads on the basis of differences between expected and observed rates after 1998 for the population of each county involved. *See black versus green trend lines.*

4. We summed avoided cases across time. *See blue line representing cumulative number of cases avoided.*

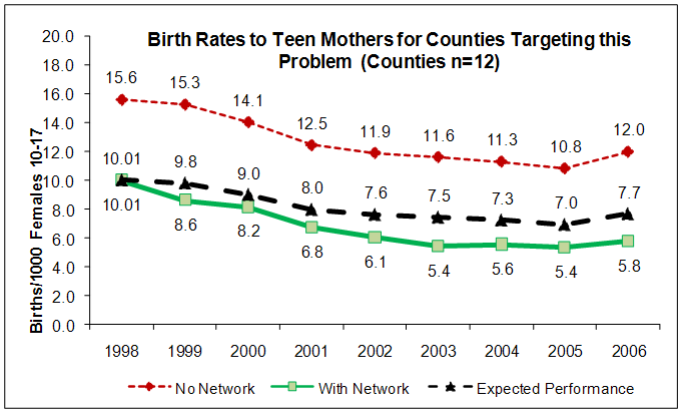
5. In actual fact, for cost savings calculations we narrowed the cases avoided to the period after 2001, from 2002 to 2006. This represented the period of time for which we had data closest to the one we wanted to project: the 2009-2011 biennium. It also was the period after the year 2001 in which some Community Networks were defunded since they had not built a minimum level of community capacity.

For teen pregnancies, as displayed in the table, we found that rates declined in both the FPC funded and unfunded groups, but teen pregnancies decreased at a faster rate in the funded group. Similar patterns of declining rates were found for felony filings and dropping out of school.

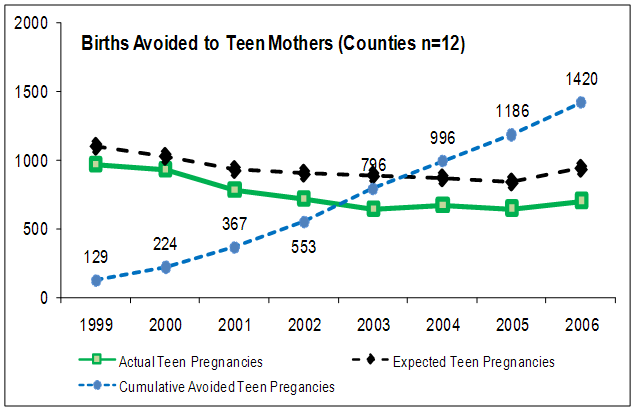
In the case of out of home placements, rates increased for both the FPC funded and unfunded groups, but rates increased at a faster rate for the unfunded group.

Figure 1
Example of Calculations of Number of Births Avoided to Teen Mothers

Trends in Rates
Expected rates if funded counties had no Network



Cumulative Number of Births Avoided
Differences between actual births and expected births



Notes

King County was excluded from these analyses due to the fact that indicator rates were available only for whole counties and the city of Seattle network was de-funded while the other four networks in King County continued receiving FPC funding.

For two indicators, Births to Teen Mothers and Out of Home Placements, we used three year average rates, 1996 to1998, for the baseline year to increase their reliability and stability. Such data were not available for the other two indicators.

DID THE DIFFERENCES IN BASELINE RATES BIAS THE ESTIMATES OF COST SAVINGS?

We compared the rates of FPC funded and unfunded counties in 1998 on each of the four indicators used to estimate prevented cases (caseloads avoided). When looking for biases in the choice of comparison groups, researchers seek comparison groups that are similar and are not already better in the 'dependent' variables.

The traditional expectation is that worse situations lead to obstacles in developing community capacity to deal with them. Worse situations lead to despair in making things better. If the situation is not too bad it leads to hope that change is possible. So we hoped to find either similarities in rates or conservative biases.

We found that two of the rates were similar, two of the rates differed but in a conservative direction *(See table 1).*

- Out of home placement rates and births to teen mother rates were similar, NOT statistically different, between the two groups of counties.
- Filed juvenile offender rates and school dropout rates were worse NOT for unfunded counties, but for FPC funded ones. In this case the 'treatment group" is worse and so the bias is in a conservative direction.

Table 1

Differences in Baseline Rates of Four Indicators Between FPC Funded and Unfunded Counties
(Funded Counties = 29, Unfunded Counties = 10)

	FPC Funded Mean	**Unfunded** Mean	**Sig. of Difference**
Filed Juvenile Offenders	2.72	2.11	**0.042**
School Drop Outs	7.99	5.3	**0.002**
Out of Home Placements	2.9	3.6	**0.263**
Births to Teen Mothers	11.05	10.15	**0.609**

WERE THE FUNDED AND UNFUNDED COMMUNITIES SIMILAR IN 1998 AND DID THEY CHANGE IN SIMILAR WAYS BETWEEN 1998 AND 2006?

The study found that they were very similar on all social, economic and population characteristics at the beginning of the study period. The differences were all small and statistically insignificant. Even the severity index measuring the pile-up of children and family problems was similar for both groups of counties - similar means and similar standard deviations; the difference between the means was not statistically significant. *See Table 2.*

Table 2

Differences in Social & Economic Conditions in 1998 Between FPC Funded and Unfunded Counties
(Funded Counties = 29, Unfunded Counties = 10)

	FPC Funded		**Unfunded**		**Sig. of Difference**
	Mean	St. Dev.	Mean	St. Dev.	
FPC Severity Index	3.86	2.57	4.10	2.69	**0.69**
Food Stamps	109.16	37.43	141.62	51.02	**0.23**
Welfare Grants	130.07	47.17	159.68	59.72	**0.34**
Unemployment	5.96	1.98	7.69	2.84	**0.30**
Pop. Change	12.20	7.76	7.51	11.57	**0.18**
Adult Crime	1.75	0.73	1.52	0.72	**0.57**
Race/Ethnicity	14.14	10.43	13.25	10.19	**0.99**
Divorce Rate	5.99	1.08	5.93	0.99	**0.25**

The study tested whether social, economic and demographic factors changed in different ways for one group, but not the other group of counties, in the period from 1998 to 2006. If they improved more among funded counties, and got worse in unfunded counties, these factors may have accounted for the differences in changing rates of problem behaviors.

The two groups of counties had very similar changes on almost all social, economic and population characteristics between 1998 and 2006. The small differences were all statistically insignificant, except for one. Changes in welfare grants decreased significantly less in funded counties, the welfare situation seemingly not improving for funded counties as much as it had for unfunded ones. This creates a small bias, but in a 'conservative direction'. *See Table 3.*

Table 3
Difference in Changes in Social & Economic Conditions
In the Study Period 1998 to 2006
Between FPC Funded and Unfunded Counties
(Funded Counties = 29, Unfunded Counties = 10)

	FPC Funded		Unfunded		Sig. of
	Mean	St. Dev.	Mean	St. Dev.	Difference
Food Stamps Change	26.57	18.14	21.07	27.17	**0.14**
Welfare Change	-22.02	20.73	-41.65	43.95	**0.02**
Unemployment Change	0.25	1.37	-0.42	1.58	**0.89**
Change in Pop.Change	-0.36	8.89	-1.70	11.22	**0.46**
Adult Crime Change	-0.16	0.52	-0.11	0.66	**0.48**
Race/Ethnicity Change	5.30	3.00	2.77	6.23	**0.27**
Divorce Rate Change	-0.87	0.56	-0.90	0.30	**0.27**

The conclusion was that the two groups of funded and unfunded counties were very similar in both initial conditions and in the ways conditions changed between 1998 and 2006.

WHAT WERE THE METHODS USED TO ESTIMATE COST SAVINGS PER CASE AVOIDED?

The amount of cost savings was calculated based on actual taxpayer costs avoided per case avoided. Costs to Washington State programs were utilized whenever they were available. *See sources listed below.*

Efforts were made to avoid possible duplication of costs avoided across the four indicators, especially in short term, 2009-11 biennium savings. For example, some teen mothers and some youth involved in criminal behavior also drop out of school. We avoided most duplication by not claiming short term costs for school drop outs. We also limited costs for births to teen mothers to medical expenses even though early parenthood often results in public costs for income, housing and other supports.

Costs were expressed in 2008 fixed dollars.

Sources used for estimating costs associated with avoided cases

For youth felony filings

Washington State Institute for Public Policy (September 17, 2004). Benefits and costs of prevention and early intervention programs for youth: Technical Appendix p. 74. The per unit taxpayer cost of a juvenile felony is $30,600 if the juvenile is detained at the local level and $36,000 if the juvenile is sentenced to a JRA/state institution. WSIPP made this calculation using average daily populations.

Scanlon, JR, Webb, L. (1981). Juvenile offenders who become adult criminals. Criminal Justice Review (6:1). 26% of juvenile offenders go on to commit an adult crime.

Stephen, J. (2004). State prison expenditures, 2001. *Bureau of Justice Statistics Special Report*. Washington DC: US Department of Justice. The average cost of an adult incarceration is $22,600 per case.

For dropping out of school

Alliance for Excellent Education (November, 2006). Healthier and wealthier: decreasing health care costs by increasing educational attainment. *Issue Brief.* The strong relationship between health and educational attainment affects insurance, resulting in $15,632 in public costs per drop out for Medicaid and uninsured costs.

Sadovi, C. (September 24, 2008). Study: drop out cost is $221,000 each. *Chicago Tribune, Breaking News*. Based on costs reported in the state of Illinois, the lifetime cost of each drop out to the public coffers is $221,000 for reduced tax revenue, unemployment, income support, and other entitlements/benefits.

For out of home placements

Washington State Institute for Public Policy (July, 2008). Evidence-based programs to prevent children from entering and remaining in the child welfare system: benefits and costs for Washington. p. 32. The expected present value of each out of home placement in Washington is $27,887. Expected present value of an accepted CPS referral is $5,183 per case.

Washington State Institute for Public Policy (July, 2008). The lifetime cost for health and mental health care is $1902 per victim of child abuse when averaged across types of maltreatment; 50% of the cost, or $951, is borne by the public.

For births to teen mothers

The National Campaign to Prevent Teen and Unplanned Pregnancy (2008). The Public Costs of Teen Childbearing: Key Data. www.teenpregnancy.org/costs. The annual cost of health care, child welfare, incarceration and lost tax revenue is $4080 for each birth of a child to a mother 17 or younger. Annual cost for 18-19 year old mothers is $1430.

The National Campaign to Prevent Teen and Unplanned Pregnancy (2008).

WHAT MADE THE ESTIMATES OF CASES AVOIDED AND COST SAVINGS CONSERVATIVE?

1. Analysis was limited to four indicators of children and family problems: juvenile felony filings, dropping out of school, out of home placement of children and births to teen mothers. To the extent that Networks reduced other social problems under their jurisdiction (domestic violence, youth substance abuse, and teen suicide) and these other social problems resulted in taxpayer savings, caseload reductions were understated in this analysis.

2. Only Community Networks that targeted the above four problems -with prevention plans and efforts logically related to the specific problem analyzed, were included in the calculation of cases avoided. Other FPC funded networks may have reduced rates in these problems as part of their general strategy. Analysis was restricted to:

   15 counties working on reducing teen violence and delinquency

   18 counties working on reducing school drop-outs

   10 counties working on abuse and neglect issues, reducing out-of-home placements of children

   12 counties working on preventing teen pregnancies

3. The number of cases avoided was averaged over a set of years, 2002 to 2006, to reduce the year by year variability and to increase the overall reliability of the estimates. These procedures underestimated actual caseloads avoided occurring more recently to the extent that community capacity increased over time and reductions in cases avoided increased over time as well.

4. We did not claim avoided cases for differences between funded and unfunded counties between 1998 and 2001. We calculated only the difference in caseloads attributable to the Family Policy Council funding and support since 2002. This ignores any substantial differences in prior cases avoided due to early community efforts at building community capacity and early success in reducing rates of children and family problems.

5. No short term savings, for the 2009-11 biennium, were claimed for high school dropouts. Most public costs associated with drop out occur due to lifetime reductions in earning power. However, some do occur earlier, due to increased rates of other problems associated with dropping out of school: like substance abuse, depression and delinquency.

6. We only calculated actual cost savings to taxpayers. Additional 'societal savings,' often costs avoided by the community, victims, businesses and the like were not valued for this analysis.

7. Cost savings were expressed in fixed 2008 dollars without adjusting for inflation.